

## CLAIMS

What is claimed is:

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1. A system for managing error analysis within a grid environment, comprising:

a grid environment comprising a plurality of diverse systems; and

10 a first agent enabled to receive a plurality of types of error messages generated from said plurality of diverse systems within said grid environment;

a parsing controller at said first agent for parsing each of said plurality of types of error messages to determine a general error indicator; and

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a resolution controller at said first agent for attempting to resolve said general error indicator for each of said plurality of parsed error messages and return a solution to each of said plurality of error messages.

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2. The system according to claim 1 for managing error analysis within a grid environment, further comprising:

a plurality of second agents accessible to said first agent, wherein said plurality of second agents specialize in resolving errors not resolvable by said first agent; and

said resolution controller further comprising means for distributing each of said parsed error message to one from among said plurality of second agents.

3. The system according to claim 2 for managing error analysis within a grid environment, further comprising:

a plurality of third agents accessible to said plurality of second agent, wherein said plurality of third agents specialize in resolving errors not resolvable by said plurality of second agent.

4. The system according to claim 1 for managing error analysis within a grid environment, wherein said first agent is distributed across a selection of said plurality of diverse systems in said grid environment.

5. The system according to claim 1 for managing error analysis within a grid environment, wherein said first agent is operable within at least one layer of a grid architecture for said grid environment.

5 6. The system according to claim 5 for managing error analysis within a grid environment, wherein said at least one layer is functionally located above a network layer.

7. The system according to claim 1 for managing error analysis within a grid environment, wherein said parsing controller selects a particular policy according to said general error  
10 indicator from a plurality of policies and wherein said resolution controller to resolve said general error indicator according to said particular policy.

8. The system according to claim 7 for managing error analysis within a grid environment, wherein said plurality of policies are validated against an XML document type definition.  
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9. The system according to claim 1 for managing error analysis within a grid environment, wherein said resolution controller further comprises:

means for accessing a service profile associated with said general error indicator; and

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means for adjusting usage of a selection of resources within said grid environment according to said service profile to resolve said general error indicator.

10. The system according to claim 1 for managing error analysis within a grid environment,  
wherein said solution comprises at least one from among an adjustment of resource usage by a  
particular service, an explanation of a particular error message, and a recommendation of  
5 alternate resources.

11. The system according to claim 1 for managing error analysis within a grid environment,  
wherein said plurality of systems within said grid environment comprise at least one from among  
a client system, a resource node, and a grid manager.

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12. The system according to claim 1 for managing error analysis within a grid environment,  
further comprising:

a transmission controller for controlling transmission of said solution to a requester

15 system in a transmission format specified for said requester system.

13. The system according to claim 1 for managing error analysis within a grid environment,  
wherein each of said plurality of types of error messages indicates the occurrence of a  
suboptimal condition within said grid environment.

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14. A method for managing error analysis within a grid environment, comprising:

receiving, at a first agent, a plurality of types of error messages generated from a plurality of diverse systems within a grid environment;

5 parsing each of said plurality of types of error messages to determine a general error indicator; and

attempting to resolve said general error indicator for each of said plurality of parsed error messages and return a solution to each of said plurality of error messages, such that error analysis of a plurality of types of error messages in said grid environment is handled by said first  
10 agent rather than by said plurality of diverse systems.

15. The method according to claim 14 for managing error analysis within a grid environment, wherein attempting to resolve said general error indicator further comprises:

15 distributing each of said parsed error messages to one from among a plurality of second agents accessible to said first agent, wherein said plurality of second agents specialize in resolving errors not resolvable by said first agent.

16. The method according to claim 15 for managing error analysis within a grid environment, further comprising:

distributing each of said parsed error messages from said plurality of second agents to a  
5 plurality of third agents, wherein said plurality of third agents specialize in resolving errors not  
resolvable by said plurality of second agent.

17. The method according to claim 14 for managing error analysis within a grid environment, wherein said first agent is distributed across a selection of said plurality of diverse systems in  
10 said grid environment.

18. The method according to claim 14 for managing error analysis within a grid environment, wherein said first agent is operable within at least one layer of a grid architecture for said grid  
environment.

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19. The method according to claim 18 for managing error analysis within a grid environment, wherein said at least one layer is functionally located above a network layer.

20. The method according to claim 14 for managing error analysis within a grid environment, wherein attempting to resolve said general error indicator further comprises:

selecting a particular policy according to said general error indicator from a plurality of  
5 policies accessible to said first agent; and

resolving said solution to said general error indicator with said particular policy.

21. The method according to claim 20 for managing error analysis within a grid environment,  
10 wherein said plurality of policies are validated against an XML document type definition.

22. The method according to claim 14 for managing error analysis within a grid environment, wherein said resolution controller further comprises:

15 accessing a service profile associated with said general error indicator; and

adjusting usage of a selection of resources within said grid environment according to said  
service profile to resolve said general error indicator.

23. The method according to claim 14 for managing error analysis within a grid environment, further comprising:

transmitting said solution comprising at least one from among an adjustment of resource  
5 usage by a particular service, an explanation of a particular error message, and a  
recommendation of alternate resources.

24. The method according to claim 14 for managing error analysis within a grid environment, wherein said plurality of systems within said grid environment comprise at least one from among  
10 a client system, a resource node, and a grid manager.

25. The method according to claim 14 for managing error analysis within a grid environment, further comprising:

15 controlling transmission of said solution to a requester system in a transmission format specified for said requester system.

26. A computer program product for managing error analysis within a grid environment, comprising:

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a recording medium;

means, recorded on said recording medium, for receiving, at a first agent, a plurality of types of error messages generated from a plurality of diverse systems within a grid environment;

means, recorded on said recording medium, for parsing each of said plurality of types of error messages to determine a general error indicator; and

means, recorded on said recording medium, for attempting to resolve said general error indicator for each of said plurality of parsed error messages and return a solution to each of said plurality of error messages.

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27. The computer program product according to claim 26 for managing error analysis within a grid environment, wherein said means for attempting to resolve said general error indicator further comprises:

15 means, recorded on said recording medium, for distributing each of said parsed error messages to one from among a plurality of second agents accessible to said first agent, wherein said plurality of second agents specialize in resolving errors not resolvable by said first agent.

28. The computer program product according to claim 26 for managing error analysis within a grid environment, further comprising:

means, recorded on said recording medium, for distributing each of said parsed error  
5 messages from said plurality of second agents to a plurality of third agents, wherein said plurality of third agents specialize in resolving errors not resolvable by said plurality of second agent.

29. The computer program product according to claim 26 for managing error analysis within  
10 a grid environment, wherein said means for attempting to resolve said general error indicator further comprises:

means, recorded on said recording medium, for selecting a particular policy according to said general error indicator from a plurality of policies accessible to said first agent; and  
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means, recorded on said recording medium, for resolving said solution to said general error indicator with said particular policy.

30. The computer program product according to claim 26 for managing error analysis within  
20 a grid environment, further comprising:

means, recorded on said recording medium, for transmitting said solution comprising at

least one from among an adjustment of resource usage by a particular service, an explanation of a particular error message, and a recommendation of alternate resources.

31. The computer program product according to claim 26 for managing error analysis within  
5 a grid environment, further comprising:

means, recorded on said recording medium, for controlling transmission of said solution to a requester system in a transmission format specified for said requester system.